

2014 Solid-State Lighting R&D Workshop

WELCOME

January 28, 2014

James R. Brodrick, Ph.D.

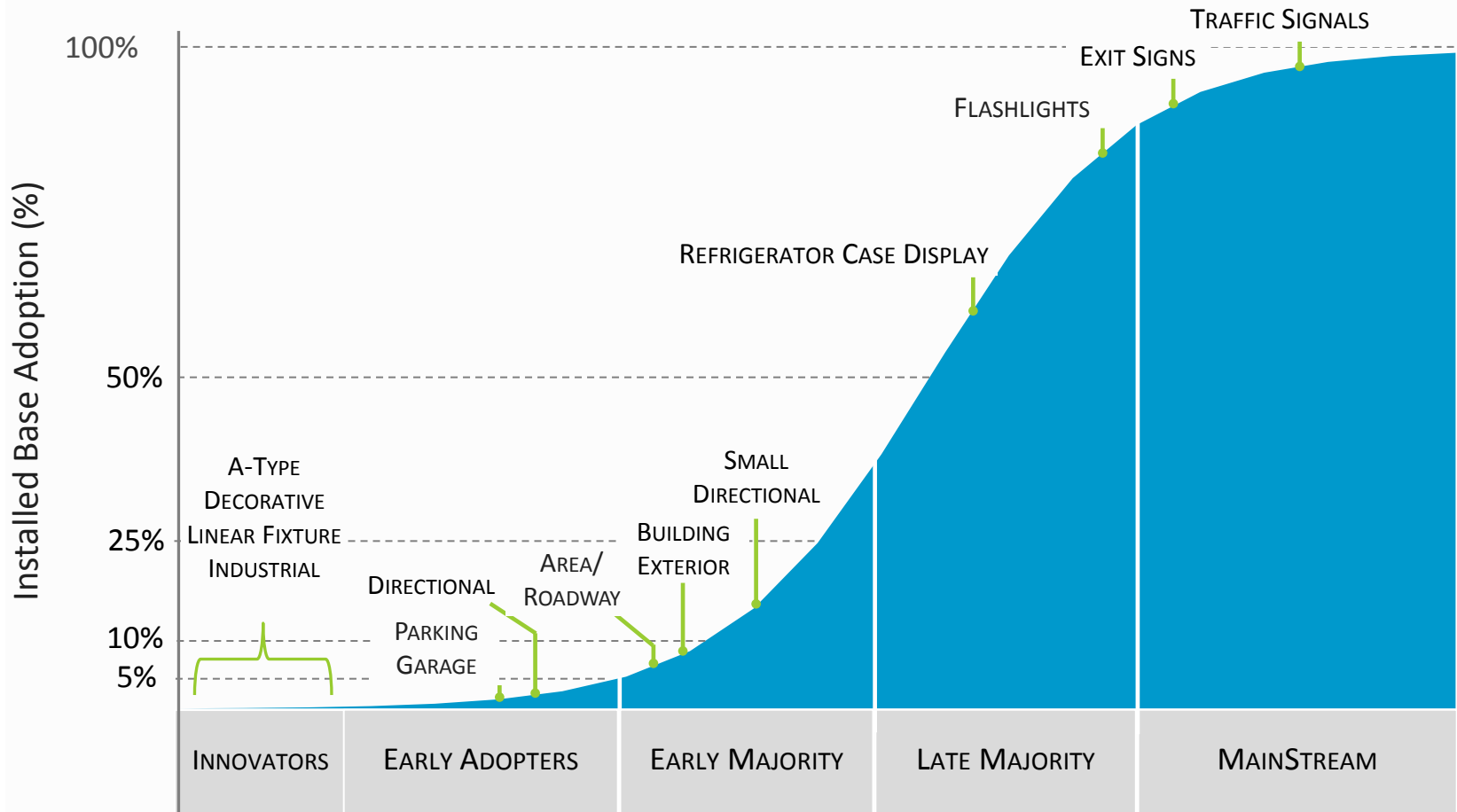
U.S. Department of Energy

Mining the True Value of SSL



The Evolution of Adoption

It takes time...



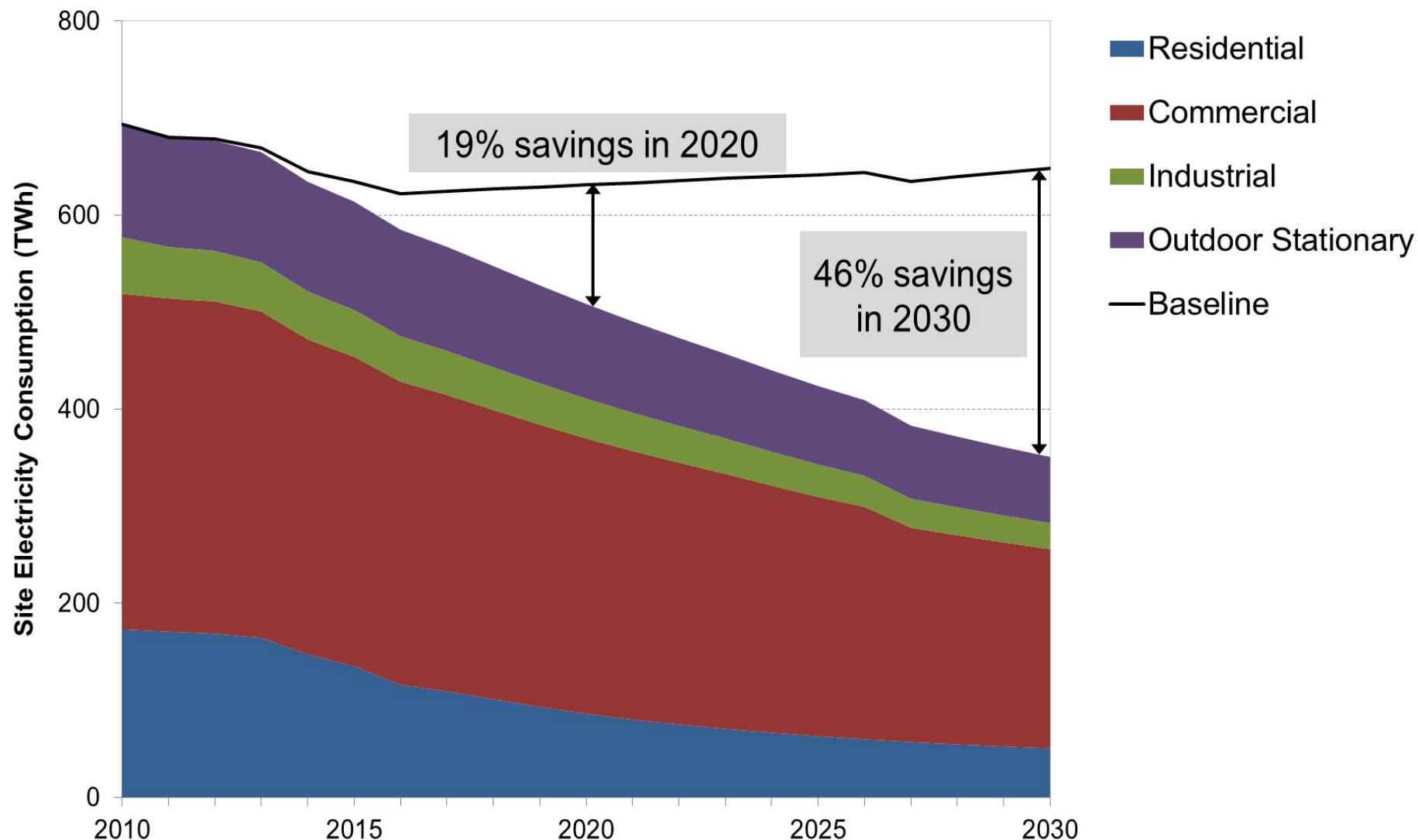
The Next Frontier for SSL

Potential to be far more
than a commodity in
the old lighting
paradigm



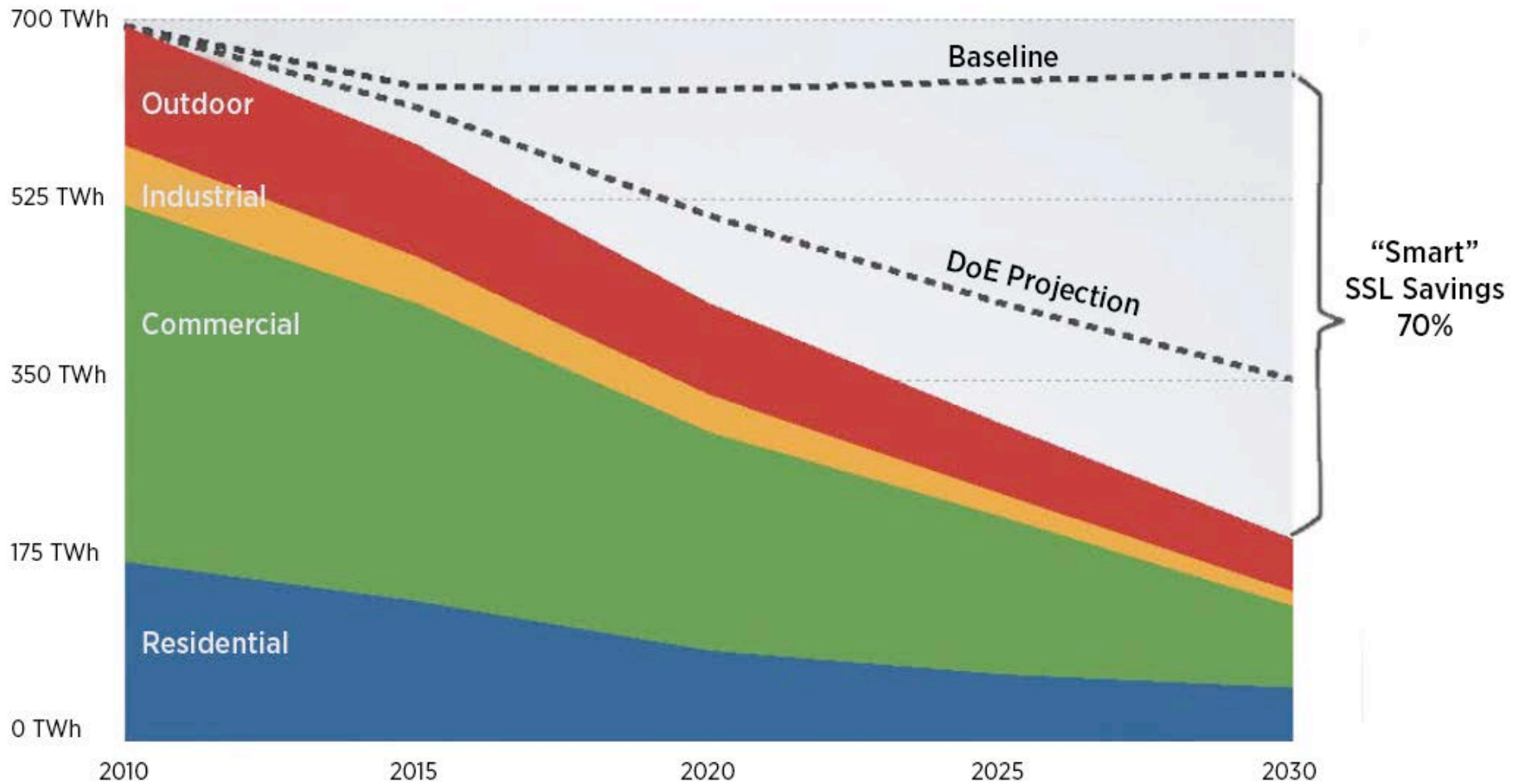
Value-added features
will drive wider adoption

Let's Not Forget About Saving Energy

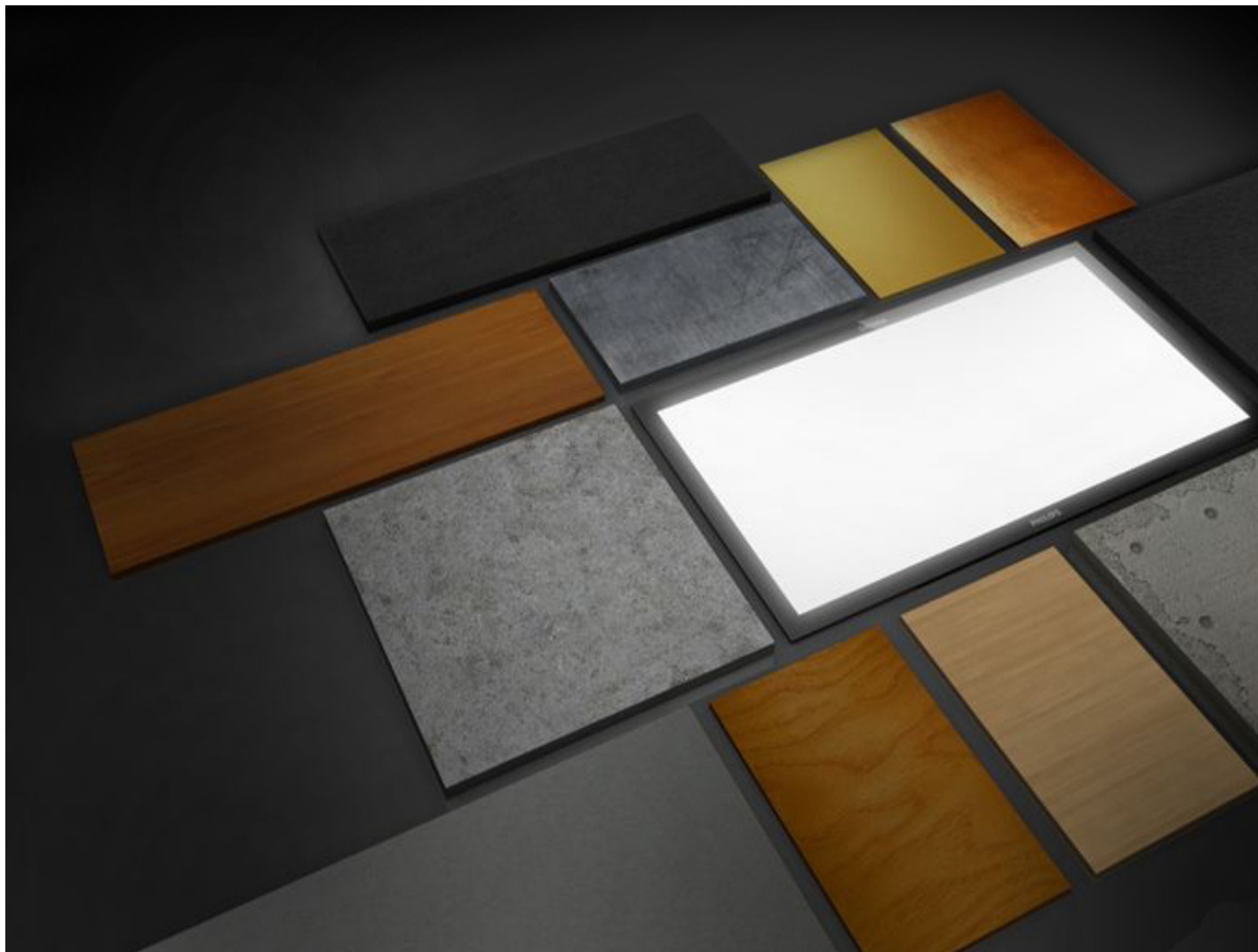


Source: Energy Savings Potential of Solid-State Lighting in General Illumination Applications, January 2012. ssl.energy.gov/tech_reports.html

But What If All SSL Fixtures Were Smart?



Why Can't We Treat Lighting Like a Material?



What Does the Future Look Like for OLEDs?



What Future R&D Is Needed?



How will quantum dots fit in?

To get more light out of the OLED we need to...

I wonder what's for lunch?

A more efficient green LED would help...

Three Packed Days

- Expert speakers share their views:
 - Exploiting SSL attributes in addition to energy efficiency
 - What is needed to drive the next wave of innovation?
- Science challenges: How can an improved understanding of the underlying science impact performance and cost?
- Alternative applications for SSL: What can we learn from airline, automotive, space, and agricultural uses of LEDs?



Three Packed Days: Track Sessions



LED track sessions...

Explore trends in packaging and integration, plus luminaire design and functionality

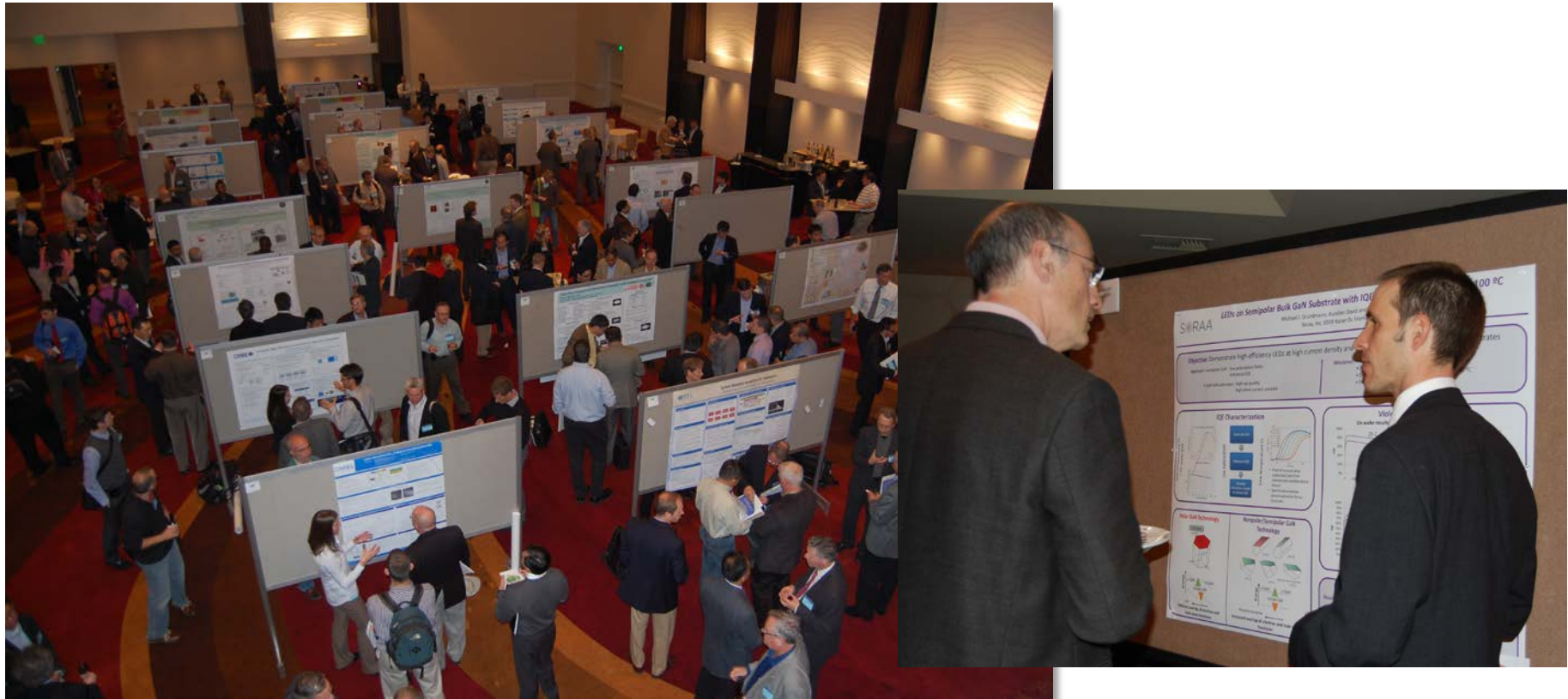


OLED track sessions...

Examine issues around charge distribution, light extraction, encapsulation

Recap of Rochester planning meeting in October

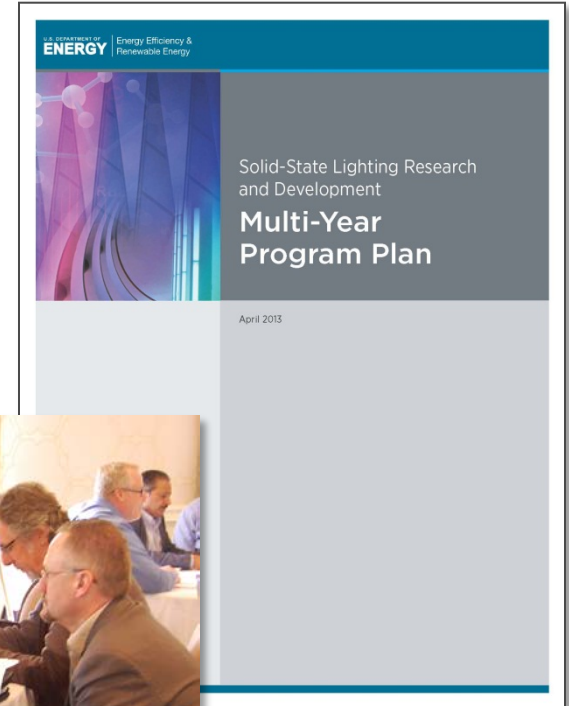
Three Packed Days: Poster Session



Features the work of today's leading SSL scientists
Opportunity for one-on-one discussions

Three Packed Days: Planning for Action

Discussion of priorities, metrics, and milestones



Our Challenge

- Reach full potential
- Capture energy savings
- Attributes mean value added
- What to do?
- Who does it?

***Learn, share, participate
over the next three days***



How long should you try? Until.

—Jim Rohn

